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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,260	01/16/2002	Horst Greiner	DE 010021	9268

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EXAMINER

CARIASO, ALAN B

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,260

Applicant(s)

GREINER, HORST

Examiner

Alan Cariaso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 11 is objected to because of the following informalities: Claim 11, line 2, the "third reflecting layer" suggests there should be a second reflecting layer which has not been mentioned in the claim or claim preceding it. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over VIRET et al (US 3,241,256) in view of STRACENER (US 4,449,024) and LANG (US 4,714,983).
5. VIRET discloses an optical waveguide (12) into which a plurality of cavities (fig.1) is provided, each cavity accommodating a light source (18), which cavities each comprise an upper side being covered by an opaque layer (19, col.3, lines 31-36) and

side walls where light coupling or transmitting takes place (fig.1); the side walls are perpendicular to a light emission surface (adjacent 17) and upper sides (19) are parallel to the light emission surface; wherein the cavities are covered by a second reflecting layer (22, col.4, lines 28-39) on their lower side (21) opposite the upper sides (19); wherein the cavities are cylindrical in shape (figs.1,2); wherein the cavities are provided at a lower side (fig.1) of the optical waveguide plate (12); wherein the edges (22) of the cavities situated opposite the upper side (19) are surrounded by a reflecting layer (22).

6. However, VIRET does not disclose the first layer being reflective. STRACENER teaches a black plug (57-fig.3) defining a layer on upper side of cavity (56) of an optical waveguide plate (18), where the black plug prevents light energy from being dispersed upwardly and assists in causing light energy to laterally diffuse through the plate (col.5, lines 9-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the cavities of the waveguide plate device of VIRET et al to include a layer that blocks light and laterally disperses light into the optical waveguide as taught by STRACENER in order to efficiently increase light diffusion from the internal light source to the optical waveguide plate while preventing bright spots of the display.

7. However, VIRET does not disclose the light sources being light emitting diodes. LANG teaches the use of light emitting diodes (36, col.4, lines 14-20) for the purpose of providing colored light to the display. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the light waveguide

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plate and display device of VIRET et al including LEDs as the light sources as taught by LANG in order to display colored light on the display.

8. As for claim 12, the recitation "A liquid crystal display device" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Allowable Subject Matter

9. Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. BOLLER et al (US 4,096,550) shows a light source in a cavity of light plate that includes outer reflective layers on at least a top surface and side surface and an LCD display on the plate. BASSETT JR. (US 2,953,668) and HARDESTY (US 3,131,670) show other lamp-accommodating cavities in light plates that include light blocking or reflecting layers adjacent the cavity or lamps.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Cariaso whose telephone number is (703) 308-1952. The examiner can normally be reached on M-F (9:00-5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Alan Cariaso
Primary Examiner
Art Unit 2875

AC
February 10, 2003